

# INTERIOR HORT...for interiorscape professionals

Center for Urban Horticulture  
University of Washington  
Vol. 2, No. 2

Cooperative Extension  
Washington State University  
Spring 1988

## INTERIORSCAPE FORUM:

### *Ficus benjamina*—Keeping It Alive, Healthy, and Attractive

Date : Wednesday, May 18  
Time : 7 to 9:30 p.m.  
Location : Center for Urban Horticulture

Discussion Leaders:  
Van Bobbitt, Center for Urban Horticulture; Toni Pietromonaco, Interior Plant Design; George Pinyuh, Washington State University Cooperative Extension; Sarah Reichard, Center for Urban Horticulture.

*Ficus benjamina* is an extremely popular but temperamental interior plant. As a result, considerable research has focused on it. This forum will review the results and implications of this research as it relates to acclimation, light, water, nutrition, leaf shines, and potting media. Alternatives to *Ficus benjamina* will also be discussed.

This forum will consist of group discussions and a sharing of information with the entire group. Afterwards, notes from the forum will be typed and sent to all participants. Refreshments will be served.



"Weeping Fig"  
*Ficus benjamina*

#### Registration Form: Interiorscape Forum

Registration Fee  
Before May 10 ..... \$5.00  
After May 10 ..... \$8.00

Firms using purchase orders must make prior registration arrangements.

Make checks payable to the University of Washington; no bank cards.

Portion of fees may be used for refreshments and hosting speakers.

Receipts will not be returned by mail; they will be available at the door.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE (DAY) \_\_\_\_\_ PHONE (EVE) \_\_\_\_\_

Mail payment and registration to: Urban Horticulture Program, University of Washington, GF-15, Seattle, WA 98195

For more information please call 545-8033.

### Integrated Pest Management for Interiorscapes

The *Common Sense Pest Control Quarterly* is running a series of articles on the "least-toxic management of pests on plants grown indoors." Past issues have covered the management of scales, mealybugs, mites, ants, slugs and snails, black vine weevil, thrips, aphids, and leaf miners. Upcoming issues will discuss fungus gnats and root diseases. These articles by Helga Olkowski describe cultural, physical, biological, and low-impact chemical controls.

The *Common Sense Pest Control Quarterly* is published by the Bio-Integral Resource Center, P.O. Box 7414, Berkeley, CA 94707. This publication is also available for reference at the Miller Library, Center for Urban Horticulture.



# Water: Effect of Chlorine, Fluoride, and Temperature on Indoor Plants

George Pinyuh  
Cooperative Extension  
Washington State University

Although many books on houseplants warn against irrigating with chlorinated tap water, there has been little or no scientific evidence to back up these warnings. Most admonitions suggest that municipal tap water stand overnight to allow the chlorine to escape as a gas. Some even suggest that only rain or distilled water be used where tap water has been chlorinated.

Precisely because there was not much evidence concerning the harmful effects of chlorinated tap water, researchers at a University of Connecticut agricultural experiment station recently performed tests which should finally put the matter to rest. A wide range of foliage plants, flowering plants, and vegetable seedlings were used in the tests.

Although treated tap water contains chlorine at no more than one part per million (ppm), the researchers used water ranging from 0 to 77 ppm. The test plants were irrigated with this water for a period of twelve weeks.

Interestingly enough, it took quite some time for any of the potted plants to show negative effects from the treatments, and then only from the higher concentrations. For example, vegetable seed germination was not affected at all, even by the highest concentrations. But after a period of three weeks, the vegetable seedlings subjected to the highest chlorine concentrations did begin to exhibit a lack of vigor and foliar chlorosis.

In the case of geraniums, kalanchoes, marigolds, and petunias, it was six weeks before they exhibited any negative effects from 37 and 77 ppm chlorine concentrations. Again the result was decreased vigor and chlorosis, plus some dropping of older leaves on the kalanchoes.

For plants like fuchsias, streptocarpus, Boston fern, jade plant, asparagus fern, grape ivy, peperomias, spathiphyllum, and spider plant, it actually required more than 77 ppm of chlorine to cause any significant loss in quality.

What does this mean? Simply put, chlorine from municipal water supplies is not likely to damage any houseplants, bedding plants, or vegetable transplants.

On the other hand, fluoride, which is often added to municipal water supplies to reduce tooth decay, does have an adverse effect on many houseplants. Contrary to what some say, fluoride will not go off as a gas if the water is allowed to stand overnight. Sensitive plants, like palms, dracaenas, and spider plants, are bound to show burned and dried leaf tips and margins, and even necrotic areas in the center of leaves, when irrigated with fluoridated water. In fact, evidence suggests that these fluoride-sensitive plants are often damaged by water that has not been fluoridated. Apparently there is just enough fluoride in most ground water to damage these plants.

If fluoride is a problem, then rain or distilled water are options to consider on these very sensitive plants. Fluoride can also be tied up in potting soils by maintaining the pH at 6.5. At this pH, the plants will not pick up the fluoride and therefore should not be damaged. To use this latter method, the pH of the potting soil must be monitored accurately. Inexpensive pH meters may not be precise enough to do the job.

Considering that there is not enough chlorine in tap water to damage plants and that fluoride cannot be evaporated from water, is there any reason to allow water to stand for a period of time before using it on indoor plants? Perhaps there is.

During the winter especially, it is not uncommon for unheated tap water to be at 45°F. Such cold water can be detrimental to the roots of tropical plants. At the very least, cold roots do not pull up water and nutrients very well. Consequently, the plants may suffer physiological stress, such as wilting.

At the very worst, the consistent use of very cold water on tropical plants might kill enough root hairs to impede plant growth or cause certain stress symptoms. Leaf necrosis and tip dieback on some plants may be traceable to the use of extremely cold water.

One way to reduce this cold water stress would be to allow tap water to stand until it rises to room temperature. Of course, one can also warm cold water with a bit of hot before irrigating.

## BOOK REVIEW

*Compendium of Ornamental Foliage Plant Diseases*, A. R. Chase, 1987. APS Press, 92 pp. inc. index, \$20 paper.

Though \$20 may sound expensive for a 92 page paper cover book, this one contains a wealth of information for interiorscapers. Its purpose is to present "the most current and complete information on diseases of ornamental foliage plants," and it does that.

The book is divided into two parts. The first covers infectious diseases caused by fungi, bacteria, nematodes, and viruses, while the second part discusses noninfectious diseases—those caused by such factors as nutritional imbalance, environmental stress, and phytotoxicity.

After becoming familiar with the organization of the book, it is easy to use as a diagnostic tool. The first step is to check a table listing all the common foliage plants and the diseases to which they are susceptible. Then, for those particular diseases, one can find detailed descriptions that include symptoms, causal organisms, and control measures. References are listed for each disease if more information is desired.

The book's second part on noninfectious diseases includes tables providing information about phytotoxicity of fungicides, sensitivity to fluoride, sensitivity to SO<sub>2</sub> in the air, and the probable causes of abiotic disease symptoms.

133 color plates which clearly illustrate the symptoms of many foliage plant diseases are also contained in this compendium.

The *Compendium of Ornamental Foliage Plant Diseases* is on the reference shelf at the Miller Library, Center for Urban Horticulture. It can be ordered from APS Books, American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121. Phone 1-800-328-7560.

Van Bobbitt



INTERIOR HORT Editorial Staff:  
Dr. John A. Wott  
George J. Pinyuh  
Van M. Bobbitt, editor